

Bill Provencher

Curriculum Vitae

4325 Bagley Parkway
Madison, Wisconsin 53705
(608)-233-3910
rwproven@wisc.edu

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Department of Agricultural & Applied Economics
University of Wisconsin
Madison, Wisconsin 53706
(608)-262-9494

I. Fields of Specialization

Environmental and resource economics, with particular emphasis on the dynamic allocation of resources, choice modeling (with emphasis on the dynamic aspects of choice), and socio-ecological interactions.

II. Education

Ph.D., Agricultural Economics, University of California, Davis, 1991. Dissertation: *A quantitative analysis of private property rights in groundwater.*

M.S., Environmental Studies, School of Forestry and Environmental Studies, Duke University, 1985.
Thesis: *The effect of the price of nontimber forestland output on timber supply from nonindustrial private forests.*

B.S., Natural Resources, Cornell University, 1981.

III. Professional Employment

1997-present Associate Professor, Department of Agricultural & Applied Economics, University of Wisconsin

1991-1997 Assistant Professor, Department of Agricultural & Applied Economics, University of Wisconsin

1990-1991 Instructor, Department of Agricultural & Applied Economics, University of Wisconsin

1989-1990 Graduate Research Assistant, University of California

IV. Honors/Awards and Selected Professional Service

Board of Directors, Association of Environmental and Resource Economics, 2001-2004

Co-Editor, Journal of Environmental Economics and Management, 2002-2005

Editorial Board, Land Economics, 1997-present

Editorial Council, Journal of Environmental Economics and Management, 1997-2002, 2005-present

University of California Regent Fellowship, 1985-1988

James B. Duke Fellowship (Duke University), 1984-1985

V. Research

Articles in Refereed Journals

Carpenter, S.R., B.J. Benson, R. Biggs, J.W. Chipman, J.A. Foley, S.A. Golding, R.B. Hammer, P.C. Hanson, P.T.J. Johnson, A.M. Kamarainen, T.K. Kratz, R.C. Lathrop, K.D. McMahon, B. Provencher, J.A. Rusak, C.T. Solomon, E.H. Stanley, M.G. Turner, M.J. Vander Zanden, C.-H. Wu and H. Yuan. 2007. "Understanding regional change: Comparison of two lake districts." *BioScience*: in press.

MacPherson, Alex, Rebecca Moore and Bill Provencher. "A Dynamic Principal-Agent Model of Human-Mediated Aquatic Species Invasions", submitted to *Agricultural and Resource Economics Review*, 35(1):144-154 (2006).

Provencher, Bill, and Rebecca Moore. "A Discussion of 'Using Angler Characteristics and Attitudinal Data to Identify Environmental Preference Classes: A Latent-Class Model'", *Environmental and Resource Economics*, 34:117-124 (2006).

Baerenklau, Kenneth A. and Bill Provencher. "Static modeling of dynamic recreation behavior: implications for prediction and welfare estimation", *Journal of Environmental Economics and Management*, 50(3): 617-636 (2005).

Provencher, Bill, and Richard C. Bishop. 2004. "Does accounting for preference heterogeneity improve the forecasting of a random utility model? A case study", *Journal of Environmental Economics and Management* 48(1):793-810.

McGough, Bruce, Andrew Plantinga and Bill Provencher. 2004. "The Dynamic Behavior of Efficient Timber Prices", *Land Economics* 80(1): 95-108.

Provencher, Bill, Ken Baerenklau, and Richard C. Bishop. 2002. "A Finite-Mixture Logit Model of Salmon Angling with Serially-Correlated Random Utility. *American Journal of Agricultural Economics* 84: 1066-1075 (November 2002).

Swait, Joffre, Wiktor Adamowicz, Michael Hanemann, Bill Provencher, Adele Diederich, Jon Krosnick, David Layton, David Schkade, and Roger Tourangeau. "Context Dependence and Aggregation in Disaggregate Choice Analysis". *Marketing Letters* 13, 195-205 (2002).

Spatro, Fiorenza, and Bill Provencher. "An Analysis of Minimum Frontage Zoning to Preserve Lakefront Amenities". *Land Economics* 77:1-14 (2001).

Provencher, Bill, and Richard C. Bishop. "An Estimable Dynamic Model of Recreation Behavior with an Application to Great Lakes Fishing", *Journal of Environmental Economics and Management* 33, 107-127 (1997).

Provencher, Bill. "Structural versus Reduced-Form Estimation of Optimal Stopping Problems", *American Journal of Agricultural Economics* 79, 357-368 (May 1997).

Provencher, Bill. "An Investigation of the Harvest Decisions of Timber Firms in the South-East United States", *Journal of Applied Econometrics* 10, 57-74 (1995).

Provencher, Bill. "Structural Estimation of the Stochastic Dynamic Decision Problems of Resource Users: An Application to the Timber Harvest Decision", *Journal of Environmental Economics and Management* 29, 321-338 (1995).

Provencher, Bill, and Oscar Burt. "A Private Property Rights Regime for the Commons: the Case of Groundwater", *American Journal of Agricultural Economics* 76 (November 1994): 875-888.

Provencher, Bill, and Oscar Burt. "Approximating the Optimal Groundwater Pumping Policy in a Multiaquifer Stochastic Conjunctive Use Setting", *Water Resources Research* 30 (March 1994): 833-843.

Provencher, Bill. "A Private Property Rights Regime to Replenish a Groundwater Aquifer", *Land Economics* 69 (November 1993), 325-340.

Provencher, Bill, and Oscar Burt. "The Externalities Associated with the Common Property Exploitation of Groundwater", *Journal of Environmental Economics and Management* 24 (1993), 139-158.

Provencher, Bill. "A New Approach to Increasing Timber Supply from Nonindustrial Private Forests of the South", *Land Economics* 66 (1990), 102-106.

Provencher, Bill. "Privatizing the Groundwater Resource: Individual Use and Alternative Specifications", *Water Resources Bulletin* 24 (1988), 1117-1119.

Book Chapters

Provencher, Bill, and Kenneth A. Baerenklau. "Estimation of Discrete Dynamic Decision Processes", in *Application of Simulation Methods in Environmental and Resource Economics*, Anna Alberini and Ricardo Scarpa, editors. Springer, 2005.

Provencher, Bill. "Issues in the Conjunctive Use of Surface Water and Groundwater", in *Handbook of Environmental Economics*, Daniel W. Bromley, editor. Blackwell Publishing, Cambridge MA (1995).

Loomis, John, and Bill Provencher. "Evaluating the Transferability of Regional Recreation Demand Equations," *Economic Valuation of Natural Resources: Issues, Theory, and Applications*, Rebecca L. Johnson and Gary V. Johnson, eds., Westview Press, Boulder CO (1990), 205-218.

Book Reviews

National Research Council (Committee on Valuing Ground Water), "Valuing Ground Water: Economic Concepts and Approaches" (National Academic Press, 1997). *Ground Water*, March-April 1998, vol. 36, no. 2, p.199.

Current working papers

Lewis, D.J. and B.Provencher. "The implications of heterogeneous preferences for environmental zoning." Working Paper (2007). [PDF Version](#)

Provencher, B., HI Sarakinos, and T. Meyer. "Does small dam removal affect local property values? an empirical analysis". Working paper (2006). [PDF Version](#).

Papenfus, Michael, and Bill Provencher. "A hedonic analysis of environmental zoning". Working Paper (2006). [PDF Version](#)

Other Publications/Staff Papers

Provencher, Bill. "Three Myths". *Lake Tides* 25 (3), Wisconsin Department of Natural Resources, Summer 2000.

Provencher, Bill. "Issues in the Estimation of Dynamic Microeconomic Models of Forest Use". *In the Proceedings of the Seventh Symposium on Systems Analysis in Forest Resources*. USDA Forest Service General Technical Report NC-205, 1997.

Provencher, Bill. "The Calculation of Welfare Values from Travel Cost Data when the Underlying Decision Problem is Dynamic". Staff Paper no. 404, Department of Agricultural & Applied Economics, University of Wisconsin, Madison, 1996.

Provencher, Bill and Richard C. Bishop. "An Estimable Dynamic Model of Recreation Behavior". Staff Paper no. 387, Department of Agricultural & Applied Economics, University of Wisconsin, Madison, 1995.

Behr, Christopher, and Bill Provencher. "The Optimal Rate of Waste Disposal in a Landfill: an Application to Rusk County, Wisconsin", Staff Paper no. 370, Department of Agricultural & Applied Economics, University of Wisconsin, Madison, 1994.

Provencher, Bill, and Stephen Swallow. "Taking Stock of the Timber Harvest Decision of Private Forest Owners: Some New Considerations", Staff Paper no. 344, Department of Agricultural & Applied Economics, University of Wisconsin, Madison, 1992.

Papers Invited/Selected for Presentation at Professional Conferences

Lewis, D., and B. Provencher. The implications of heterogeneous preferences for environmental zoning. Selected paper, Annual Meeting of the American Agricultural Economics Association, Long Beach, CA, July 2006.

MacPherson, Alex, Rebecca Moore, and Bill Provencher. A dynamic principal-agent model of human-mediated aquatic species invasions. Annual Meeting of the Northeastern Agricultural and Resource Economics Association (NAREEA), Annapolis, MD, June 2005.

Provencher, Bill, and Michael Papenfus. The implications of lakeshore development restrictions for long-run lakeshore property values. Invited Paper, International Symposium on Society and Natural Resources, Ostersund, Sweden, June 2005.

Van Auken, Paul M., Roger B. Hammer, Kenneth M. Johnson, John Cromartie, and Bill Provencher. "The influence of natural and built amenities on net migration in the rural United States". Selected Paper, International Symposium on Society and Natural Resources, Ostersund, Sweden, June 2005.

Provencher, Bill, Richard C. Bishop, Michael Bennett and Kenneth C. Baerenclau. "The economic value of Lake Michigan recreational salmon fishing". Selected Paper, Annual Meeting of the American Fisheries Society, Madison, WI, September 2004.

Baerenclau, Kenneth A., and Bill Provencher. "Static Modeling of Dynamic Recreation Behavior: Implications for Prediction and Welfare Estimation". Selected Paper, Annual Meeting of the American Agricultural Economics Association, Denver, CO, August 2004.

Tim Kratz, Stephen Carpenter, and Bill Provencher. "Divergent Dynamics of Riparian Land, People and Lakes". Invited Paper, Annual Meeting of the American Association for the Advancement of Science (AAAS), Seattle, WA, February 2004.

Martin D. Smith and Bill Provencher. "Spatial Search in Commercial Fishing: A Discrete Choice Dynamic Programming Approach". Selected Paper, Annual Meeting of the American Association of Agricultural Economics, Montreal, CA, August 2003. Paper also presented at the summer workshop of the Association of Environmental and Resource Economists, Madison, June 2003.

Bennett, Michael, and Bill Provencher. "On the Source of the Disparity between Recreation Trip Decisions and Retrospective Evaluations of Trip Utility". Selected Paper, Heartland Workshop for Environmental and Resource Economics, Iowa State University, Ames, Iowa, September 2002.

Kling, Catherine, Stephen Polasky and Bill Provencher. "Ecology and Economics: Towards Interdisciplinary Understanding". Selected Paper, Heartland Workshop for Environmental and Resource Economics, Iowa State University, Ames, Iowa, September 2002.

Provencher, Bill and Richard C. Bishop. "Mental Accounts and Their Consequences for Realistic Modeling of Recreation Behavior". Selected Paper, Second World Congress of Environmental and Resource Economists. Monterey, CA, June 2002.

Papenfus, Michael, and Bill Provencher. "An Economic Analysis of Ecology-Based Restrictions on Lakefront Development". Selected Paper, Second World Congress of Environmental and Resource Economists. Monterey, CA, June 2002.

Bennett, Michael, and Bill Provencher. "Experience and Expectations: Exploring the Linkages Between Ex Ante and Retrospective Fishing Trip Valuations Using Combined Revealed and Stated Preference Data", Selected Paper, Second World Congress of Environmental and Resource Economists. Monterey, CA, June 2002.

Provencher, Bill. "Using Static Recreation Demand Models to Forecast Angler Responses to Interseasonal Changes in Catch Rates". Selected Paper, Annual Meeting of the American Agricultural Economics Association, Tampa, August 2000.

Baarenklau, Ken, and Bill Provencher. "Finite-Mixture, Markov-Logit Model of Recreational Angling", Selected Paper, Heartland Environmental Workshop, Iowa State University, Ames, Iowa, September 1999.

Provencher, Bill. "Theory and Application of Minimum Frontage Zoning to Preserve Lakefront Amenities", Selected Paper, Heartland Environmental Workshop, Iowa State University, Ames, Iowa, September 1999.

Baarenklau, Ken, and Bill Provencher. "Heterogeneous Preferences in Random Utility Models", Selected Paper, annual meetings of the American Agricultural Economics Association, Nashville, August 1998.

Provencher, Bill, and Richard Bishop. "Issues in the Estimation of Welfare Values from Travel Cost Data When the Underlying Decision Problem is Dynamic", Paper Presented at the Sixth Joint Italian/Minnesota Conference on Food, Agriculture, and the Environment, Minneapolis, August 1998.

Provencher, Bill. "The Calculation of Welfare Values from Travel Cost Data When the Underlying Decision Problem is Dynamic", Selected Paper, annual meetings of the American Agricultural Economics Association, Toronto, Canada, July 1997. Abstract, *American Journal of Agricultural Economics* 79, forthcoming.

Provencher, Bill. "Issues in the Structural Estimation of Timber Harvesting Behavior". Selected Paper, Seventh Symposium on Systems Analysis in Forest Resources, Traverse City, MI, May 1997.

Bishop, Richard, and Bill Provencher. "Structural Estimation of Dynamic Recreational Trip Decisions". Selected Paper, annual meeting of the Allied Social Sciences Association, New Orleans, January 1997.

Provencher, Bill. "A Dynamic Structural Model of the Timber Harvest Decision." Selected Paper, Annual Meeting of the Northeast Agricultural Economics Association, Burlington, Vermont, June 1995.

Provencher, Bill. "A Structural Dynamic Behavioral Model of the Timber Harvest Decision", Selected Paper, annual meetings of the American Agricultural Economics Association, San Diego, CA, August 1994. Abstract, *American Journal of Agricultural Economics* 76 (1994): 1261.

Provencher, Bill. "Structural Modeling of the Timber Harvest Decision", Selected Paper, (First) Computational Economics Conference, Amsterdam, Netherlands, June 1994.

Provencher, Bill. "Approximating the Solution of Stochastic Dynamic Games: an Application to Groundwater", Selected Paper, annual meetings of the American Agricultural Economics Association, Orlando, FL, August 1993. Abstract, *American Journal of Agricultural Economics* 75 (1993): 1314.

Provencher, Bill, and Oscar Burt. "An Analysis of Private Property Rights in Groundwater", Selected Paper, annual meetings of the American Agricultural Economics Association, Baltimore, MD, August 1992. Abstract, *American Journal of Agricultural Economics* 74, 1295.

Provencher, Bill, and Oscar Burt. "A Quantitative Analysis of a Private Property Rights Regime to Restore Groundwater Stocks to Optimal Levels", Selected Paper, Conference on Water Quantity and Quality Issues, Washington, D.C., May 3-4, 1992.

Provencher, Bill. "Timber Supply from Nonindustrial Private Forests: Reconsidering the Conventional Wisdom", Selected Paper, annual meetings of the American Agricultural Economics Association, Vancouver, BC, August 1990. Abstract, *American Journal of Agricultural Economics* 72, 1359.

Provencher, Bill. "The Value of Groundwater as a Buffer Against Drought: Implications for Managing a Common Property Resource", Selected Paper, annual meetings of the American Agricultural Economics Association, Baton Rouge, LA, August 1989. Abstract, *American Journal of Agricultural Economics* 71, 1341.

VI. Research Support

2004 USDA (NRI): The Influence of Amenities and Proximate Population Concentrations on Population and Economic Growth in the Rural United States (\$140,000 over two years; co-PI with two other faculty, one at UW-Madison and one at Loyola University in Chicago).

2003 USDA-Hatch: The Economic Effects of Rural Land Use Restrictions to Preserve Environmental Amenities (\$94,000 over 3 years)

2002 NSF-LTER: Comparative Study of a Suite of Lakes in Wisconsin (\$3 million over five years; co-PI with five other UW faculty)

2002 USDC (Sea Grant): Using Survey Data in Hedonic Price Analysis: An Application to the Economic Valuation of Cleaner Water in Green Bay, Lake Michigan (\$110,000 over two years; co-PI with Rich Bishop and Jean Paul Chavas)

- 2000 NSF: Divergent Dynamics: Complex Interactions of Riparian Land, People, and Lakes. (\$6 million over six years; co-PI with eleven other UW faculty)
- 2000 USDC (Sea Grant): Combining Stated and Revealed Preference Data to Estimate the Economic Value of Recreational Salmon Fishing (\$121,000 over two years; co-PI with Richard C. Bishop)
- 1999 USDA (Hatch): The Economic Value of Preserving Natural Amenities in Remote Areas: Lake Shore Protection in Wisconsin's North Woods (\$130,000 over three years; co-PI with David Marcouiller)
- 1999 USDA (Hatch): An Investigation of the Theoretical Foundations of Cost Sharing with an Application to Wisconsin's Priority Watershed Program (\$84,000 over three years; co-PI with Richard Bishop)
- 1998 USEPA (STAR Fellowship): \$90,000 over three years, applied to graduate student support
- 1998 USDC (NOAA Sea Grant): A Dynamic Economic Model of Recreation: An Application to Wisconsin's Southern Lake Michigan Salmon and Trout Fishery (\$120,000 over three years; co-PI with Richard Bishop)
- 1996 USDA (Hatch): An Empirical Investigation of Timber Harvesting and Short-Run Timber Supply Under Uncertainty (\$48,000 over two years)
- 1996 USDC (NOAA Sea Grant): A Dynamic Economic Model of Recreation: An Application to the Lake Michigan Salmonid Fishery (\$101,000 over two years; co-PI with Richard Bishop)
- 1995 Graduate School, Univ of Wisconsin: Estimation of a Stochastic Dynamic Behavioral Model of Recreation: An Application to Sportfishing (\$11,000)
- 1992 USDA (Hatch): Analysis of Wisconsin Natural Resources in a Stochastic Dynamic Setting (\$88,000 over four years).

VI. Teaching and Graduate Advising

I have been major professor for 3 completed Ph.D dissertations (McPeak, Baerenklau, Bennett) and 6 Master's theses (Anderson, McPherson, Behr, Obert, Rosenthal, Spalatro), and have served as a committee member for two AAE Master's theses (Fumero, Chandrakashan) and 23 PhD dissertations (Champ, Demeke, Grover (Economics), Hseu (Forestry), Kim, Lin, Lyke, Mehta, Mullarkey, Okidi, Prestoman (Forestry), Rauniker (Forestry), Shively, Steele, Swinton (Economics), Takasaki, Trieman, Tsai, Turner (Forestry), Useche, Woodward, Yamasaki, Zegarra). I am currently the major advisor for three PhD students. I have also served on the graduate committees of approximately 20 IES students. In addition I have taught an undergraduate course in environmental economics with an enrollment that averages about 100 students, and four graduate courses. The course descriptions follow:

Environmental Economics (AAE 343, undergraduate, crosslisted with Economics and the Institute for Environmental Studies) Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of pollution control, preservation vs. development, deforestation, and other environmental issues.

Dynamic Natural Resource Economics. (AAE 760, graduate) Applications of optimal control theory, dynamic programming, and associated approximation methods in natural resource economics. Theoretical results characterize the efficient allocation of resources. Numerical applications examine issues in resource management.

Nonmarket Valuation (AAE 761, graduate). Methods in the valuation of nonmarket goods and services; hedonic valuation, contingent valuation, travel cost modeling.

Environmental Economics (AAE 762, graduate). Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of fisheries management, air pollution control, preservation vs. development, land economics, watershed pollution management, and other issues.

Applied Microeconomic Theory (AAE635, graduate). A mathematical treatment of canonical intermediate microeconomics: optimization, producer and consumer theory, markets and general equilibrium.

VII. Service

Professional Service (see page 1 for other professional service)

1. In the period 1996-2006 I have refereed well over 100 journal manuscripts. Journals for which I have reviewed manuscripts include: *American Journal of Agricultural Economics*, *Canadian Journal of Agricultural Economics*, *Canadian Journal of Forest Research*, *Ecological Applications*, *Ecological Economics*, *Environmental and Resource Economics*, *European Review of Agricultural Economics*, *Forest Science*, *Journal of Agricultural and Resource Economics*, *Journal of the American Water Resources Association*, *Journal of Applied Econometrics*, *Journal of Economic Dynamics and Control*, *Journal of Environmental Economics and Management*, *Journal of Forest Economics*, *Journal of Regional Analysis and Policy*, *Journal of Water Resources Planning and Management*, *Land Economics*, *Marine Resource Economics*, *Resource and Energy Economics*, *Review of Agricultural Economics*, *Society and Natural Resources*, *Water Resources Bulletin*, *Water Resources Research*.
2. Publication of Enduring Quality Award Committee, Association of Environmental and Resource Economists (AERE), 1997-2000 (Chair in 2000).
3. I have reviewed: NSF grant proposals; USDA Hatch proposals at Wisconsin, Rhode Island and Ohio State; USDC-NOAA Sea Grant proposals; Selected papers (approximately 6 per meeting) for the annual meeting of the American Association of Agricultural Economists, 1992, 1993, 1994, 2001; Credentials for tenure/promotion for colleagues at Brandeis University, Oregon State University, and Resources for the Future.
4. Presenter at various workshops and conferences for nonprofessional audiences: Sustainable Coastal Communities Workshop (sponsored by USDC-NOAA and others, Traverse City, MI, September 1998); Wisconsin Groundwater Association Technical Conference (sponsored by Wisconsin Groundwater Professionals Association, Wisconsin Dells, WI, November 1998); Workshop on Current Research on Water Resources (sponsored by the Wisconsin Association of Lakes, Rhinelander, WI, August 2002); Annual Meeting of the Wisconsin Land Information Association (Lac de Flambeau, WI, June 2004); Northwoods All Science Meeting, September 2004; Workshop on Valuation of Ecosystem Services in Agriculture (sponsored by NSF-LTER, Kalamazoo, MI, October 2005); Wisconsin Working Lands Steering Committee (Madison, December 2005); Wisconsin Buffer Initiative (Madison, WI, July 2000); Governor's Conference on Wisconsin Shoreland and Shallows (Stevens Point, WI, June 2006); Lower Green Bay RAC Scientific and Technical Advisory Committee (Green Bay, WI, Dec 2006).
5. Department seminars at the University of Wisconsin (AAE, Forestry, IES, Soil Science), University of Rhode Island, Iowa State University, University of Minnesota, University of California-Davis.

University Service

University:

Social Sciences Internal Review Board, 2003-2006
Land Use Cluster Committee, 2002-2004, 2005-2006
Kemper Knapp Bequest Committee, 2001-2005 (Chair, 2004)
Moderator for the UW Undergraduate Research Symposium, 2000-2001

Institute for Environmental Studies:

Water Resources Management Graduate Admissions Committee, 1995-1997.
Water Resources Management Executive Committee, 1997-2002

CALS:

Committee on Environmental Science Major, 2007
Honorary Recognition Committee, 2007
Academic Planning Council, 2001
Curriculum Committee, 1997-1999
Ad-Hoc Committee on Natural Resources Courses and Degree Requirements, 1997
Instructional Improvement Committee, 1997-1998
Natural Resources Core Curriculum Committee, 1993-94.

Departmental:

Director of Graduate Studies, 1997-1999, 2004-present
Graduate Committee, 1992-2002, 2004-2006
Personnel Committee, 2003, 2006
Natural Resources Prelim Committee, 1992-present (chair about once every three years)
Information Services Committee, 1995-2003
Ad Hoc Committee on Natural Resources Hiring, 1994 (chair)
Research and Library Committee, 1992
Computer Committee, 1992
Ad Hoc Space Committee, 1991
Information Services Committee, Chair 1998-2000
Information Services Committee, 2001-2004